

### **REMARKS/ARGUMENTS**

This is a reply to the Office Action dated January 8, 2008.

#### **Status of Claims**

Claims 1, 2, 4-6, 9-12 and 14-24 are currently pending in this application. Claims 3, 7, 8 and 13 have been canceled. New claims 17-24 are added. No claims are withdrawn. Claims 1, 4 and 12 are currently amended.

#### **Amendments Discussion**

In claim 1, as amended, "treated" is clarified as "impregnated" (page 6, lines 23, 28-30); clarifications are made regarding the readily releasable anionic anti-microbial agent being readily released upon introduction of the wipe into a water source to form an anionic disinfectant solution (page 3, lines 15-17, 20-22); and potassium iodide is deleted.

In claim 4, as amended, clarifications are made regarding the readily releasable anti-microbial agent being readily released upon introduction of the wipe in a water source to form an anionic disinfectant solution (page 3, lines 15-17, 20-22); and potassium iodide is deleted.

In claim 12, the antecedent for the recited anti-microbial agent is clarified.

New claim 17 is supported at page 3, lines 15-17, 20-22; page 6, lines 26-30; page 8, lines 1-5, 8-9, and elsewhere in the present application.

New claims 18-19 are supported at page 4, lines 13-15, and elsewhere in the present application.

New claim 20 is supported at page 3, lines 7-8, and elsewhere in the present application.

New claim 21 is supported at page 4, lines 22-29, and elsewhere in the present application.

New claims 22-23 are supported at page 3, lines 5-7, and elsewhere in the present application.

New claim 24 is supported at page 3, lines 20-22, and elsewhere in the present application.

No new matter is introduced. Entry of this amendment is respectfully requested.

Obviousness Rejection

Claims 1-6 and 8-16 were rejected under 35 USC § 103(a) as unpatentable over Radwanski et al. (U.S. Pat. No. 6,734,157) in view of Scholz et al. (U.S. Pat. No. 6,605,666).

The Office Action indicates that the Radwanski et al. reference discloses making wipes that provide controlled release antimicrobial agent (citing column 1-Field of Invention). The Office Action indicates that the Radwanski et al. substrate may be a fibrous nonwoven that is hydroentangled, which can be a composite absorbent fabric (abstract), thus meeting the limitations of being a laminate (citing claim 5). The Office Action further indicates that the Radwanski et al. patent teaches that the antimicrobial agent can be a plethora of agents and includes that of quaternary type (citing column 3; and also columns 7-8) and that the antimicrobial agent that is applied to the substrate is activated or released upon contact with water (citing column 5, towards the beginning). The Office Action indicates that that the Radwanski et al. patent does not teach the use of the claimed antimicrobial with an anionic binder. However, according to the Office Action the '666 patent teaches the combination of the claimed antimicrobial agent and an anionic polyurethane binder. The Office Action indicates that said composition may be used as an antimicrobial. According to the Office Action, it thus would have been obvious to a person having ordinary skill in the art at the time the invention was made to have employed the composition of the '666 patent in the composite of Radwanski et al., and that one would have been motivated to create an antimicrobial wipe. This rejection is respectfully traversed.

The presently claimed invention is related to an antimicrobial wipe comprising a fibrous nonwoven substrate impregnated or coated with *anionic binder* and a readily releasable *anionic anti-microbial agent* that is readily released upon the wipe being introduced into a water source to form an anionic disinfectant solution. The *anionic* anti-microbial agent is selected from *anionic* dual quaternary ammonia anti-microbial agent and sodium hypochloride. Significantly, the inventive wipe as comprised of an anionic binder (or an anionic/non-ionic binder mixture) has little or no affinity for an anionic disinfecting solution, and any bonds formed between the binder and disinfectant are easily broken. The resulting wipe, therefore, more readily releases the disinfectant into a water source and will not attract and retain a charged disinfectant that could possibly prematurely deplete the effectiveness of a sanitizing solution.

Neither Radwanski et al. (see col. 3, lines 33-38; columns 7-8) nor the '666 patent (see col. 15, line 56 to col. 16, line 3) specify an *anionic* anti-microbial agent that is dual quaternary ammonia anti-microbial agent or sodium hypochloride. Other differences between the present claims and Radwanski et al. and the '666 patent are discussed below.

Radwanski et al. generally refer to “soluble binders” as used to “modulate the controlled release properties of the anti-microbial agent” (col. 3, lines 55-58), but does not state the binder is anionic. There are no facts made of record showing that any binder materials disclosed by Radwanski et al. are inevitably anionic, and the Examiner has made further reference to the '666 patent in this respect in the most recent Office Action. Radwanski et al. also generally refer to quaternary amines but does not state that they are anionic in charge (col. 3, lines 38-39, col. 8, lines 1-2). The applicants point out that the charge of quaternary amines can vary between anionic, nonionic or cationic types thereof, as understood by those skilled in the art. Further, conceptually, Radwanski et al. do not reveal any recognition of the possible importance of selecting the charge of any binder relative to that property of any antimicrobial agent used in the wipe. Indeed, if they had, for sake of argument only (e.g., if they had been exposed to the insights of the present application), they presumably would have picked *opposite* charges for the binder and antimicrobial agent consistent with their stated objective of providing *controlled release* of antimicrobial agent after *repeated* washing and rinsing operations (see col. 2, lines 27-33; col. 4, lines 52-65; col. 6, lines 47-49; col. 15, lines 5-14). Again, the presently claimed wipe includes a selection and combination of materials configured to *readily release* disinfectant when the wipe is dampened.

The newly cited '666 patent is unrelated to the current invention. It discloses use of polyurethane film-forming dispersions in an alcohol-water system to form liquid drape. As explained in the '666 patent, the film-forming dispersion is applied onto a patient's skin as a pre-operative patient preparation for surgery, and after the liquid drape dries and forms a film on the patient's skin, the medical practitioner may make an incision through the drape and the patient's skin (col. 3, line 41 to col. 4, line 9). The '666 patent describes forming continuous homogenous films with polyurethane dispersions. The '666 patent does not teach or suggest any fibrous substrate constructs.

The '666 patent also does not teach or suggest that any anti-microbial agents included in the film-forming dispersion are releasable at a controlled rate over a period of time from the dried film, if it is contacted with water. The '666 indicates that the anti-microbial agent is used to impart anti-microbial properties to the liquid dispersion, and does not indicate if the dried film releases anti-microbial agent into any fluids that may (or may not) contact the dried film (col. 16, lines 4-6; Example 7). This factual issue is important as Radwanski et al. requires the controlled and sustained release of anti-microbial agent property over the course of subjecting the wiper to multiple rinsing cycles (e.g., col. 4, lines 47-59). Radwanski et al. teach use of "soluble binders" to modulate the release properties of the anti-microbial agent (col. 3, lines 56-58).

The Office Action refers to anionic polyurethane binders in the '666 patent. The '666 patent indicates that the film-forming dispersion is a reaction product of several reactants including reaction material (iii) that can be a compound containing a moiety capable of forming an anionic group or an ionic group, or other options (col. 3, lines 18-40). However, based on the applicant's review, it appears that only Example 2 (columns 23-24) of the '666 patent illustrates an anionic-functionalized polyurethane dispersion. However, Example 2 of the '666 patent does not indicate this dispersion can include any anti-microbial agent such as an anionic anti-microbial agent, nor that any film formed from this dispersion is a soluble binder of the type suggested by Radwanski et al.

Further, the '666 patent also makes reference to quaternary ammonium-stabilized polyurethane dispersions, which are understood from the '666 patent to be *cationic* components, and not anionic components, of the polyurethane dispersions (see col. 8, line 37 to col. 9, line 22; Examples 3-5). Again, the present claims recite an anionic binder, not a cationic binder.

In view of the above, the '666 patent does not teach a dispersion composition that a person of ordinary skill in the art might have considered using with the wiper construct of Radwanski et al.

Reconsideration and withdrawal of this rejection is respectfully requested.

It is believed that this application is in condition for allowance, and notice of such is respectfully requested.

U.S. Patent Application No. 10/762,945  
Amendment After Non-Final Rejection  
Reply to Office Action dated January 8, 2008

If the Examiner believes that a teleconference would be useful in expediting the prosecution of this application, the official is kindly invited to contact the applicants' representative of record indicated below.

Respectfully submitted,

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